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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/868,801 | 06/21/2001 | David Robert Fenn | OC-529 | 5080 |

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PPG INDUSTRIES INC
INTELLECTUAL PROPERTY DEPT
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EXAMINER

SERGEANT, RABON A

| ART UNIT | PAPER NUMBER |
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1711

DATE MAILED: 02/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/868,801

Applicant(s)

FENN ET AL.

Examiner

Rabon Sergeant

Art Unit

1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 December 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4,6-9,11 and 12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,6-9,11 and 12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☒ Other: PTOL-324.

Art Unit: 1711

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on December 8, 2005 has been entered.

2. Claims 2, 4, and 6-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The language, "the hydroxyl functional compound", lacks antecedent basis.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1, 2, 4, 6-9, 11, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 97/30099 alone or further in view of Noomen et al. ('363).

WO 97/30099 discloses the production of liquid coatings, wherein diphenylmethane diisocyanate is reacted with a polyester, corresponding to the instantly claimed polyester containing secondary hydroxyl groups, and a reactive diluent containing amine groups or blocked amine groups. Diphenylmethane diisocyanate is exemplified at line 44 of page 3 and the polyester containing secondary hydroxyl groups is set forth at page 6, line 29 through page 7, line 36. The polyester containing secondary hydroxyl groups is derived from the reaction of a polyfunctional carboxylic acid, such as a polyester containing two or more carboxylic acid groups, with a glycidyl ester of a C₂-C₂₀ alkanolic acid.

5. Though the primary reference cites other suitable polyisocyanates and other hydroxyl functional compounds, the position is taken that it would have been obvious to select diphenylmethane diisocyanate from the list of specified polyisocyanates, because it is exemplified as being a suitable polyisocyanate for producing the coatings and because of its commercial availability and its accepted widespread utility within polyurethane applications, and that it would have been obvious to select the aforementioned polyester containing secondary hydroxyl groups from the disclosure of hydroxyl functional compounds in view of the disclosed preferred use of such compounds for producing the coatings of the reference. See page 6, line 35 through page 7, line 36.

6. With respect to the aforementioned reactive diluent, it is noted that while the primary reference discloses the use of aldimines, ketimines, or aspartic esters, the reference does not mandate the use of such diluents. These aforementioned diluents are disclosed as being preferred; however, the disclosure of the reference encompasses amines in addition to the preferred aldimines, ketimines, or aspartic esters. Therefore, the position is taken that it would

Art Unit: 1711

have been obvious to employ amine compounds other than aldimines, ketimines, or aspartic esters as the disclosed amine functional diluent. Alternatively, even if the teachings within the primary reference are considered insufficient to support the selection of amines other than the preferred aldimines, ketimines, or aspartic esters, the position is further taken that it was known at the time of invention to employ oligomeric sterically hindered polyamines as replacements for such blocked or unblocked amines within coating compositions. Noomen et al. disclose that the use of such oligomeric hindered polyamines yields coatings having a desirable pot life/cure speed relationship not generally available with traditional unblocked polyamines, as well as a lower VOC and better appearance characteristics than generally available with the traditional blocked polyamines, such as aldimines and ketimines. See abstract and column 9, lines 16-35 within Noomen et al. Therefore, the position is taken that it would have been obvious to replace the aldimines, ketimines, or aspartic esters of the primary reference with the oligomeric hindered polyamines of Noomen et al., so as to obtain coatings having improved appearance and a lower VOC.

7. With respect to claim 12, the teachings of the primary reference are clearly suggestive of two-pack compositions. Given the disclosed concerns about pot-life and the teachings at page 8, lines 1 and 2 that the components can be mixed in any order, one of ordinary skill in the art would have been motivated to formulate the coating as a two-pack system, so as to render the system long-term storage stable. Contrary to applicants' previous assertions, "two-pack" does not necessarily require the blending of only two components; within the art, "two-pack" is understood to mean that the reactive components, in this case isocyanate-functional components and isocyanate-reactive reactants, are held separate until time of application.

Art Unit: 1711

8. The prior art rejection originally set forth within the Office action of December 27, 2004 has been reinstated, because applicants' response to this prior art rejection is based on the previously claimed subject matter that has been deleted by the instant amendment.

Any inquiry concerning this communication should be directed to R. Sergent at telephone number (571) 272-1079.


RABON SERGENT
PRIMARY EXAMINER

R. Sergent
February 19, 2006